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U.S. COAST GUARD COLLISION AT SEA

B. G. McCAUGHEY

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Problem

The collision between the USCGC Cuyahoga and the motor vessel Santa Cruz II resulted in psychological distress among the Coast Guard crewmen. The U.S. Navy Special Psychiatric Rapid Intervention Team (SPRINT) was activated to provide mental health services to the Coast Guard survivors and others that had been affected by the disaster.

OBJECTIVE

The objective of this paper was to examine and summarize the clinical data recorded by the SPRINT and to outline their approach to the intervention.

The 18 survivors were divided into two groups: ship's company and officer candidates. Their psychiatric records were examined and summarized. The records of others that were not on the ship at the time of the collision but were affected by the tragedy and seen by the SPRINT were also sumarized. Additionally, anecdotal comments made by team members were used in the preparation of this report.

RESULTS

The most prominent psychological reactions among the survivors were shock, anger, sadness and guilt. Spouses of the survivors in addition to dealing with bereavement, strove to understand their husbands reactions to the accident. Variables identified by the SPRINT as being important to their success were communication with and support from the training center command, assurances of confidentiality to the survivors, working within their natural groups, and commencement of their work almost immediately following the collision.

INTRODUCTION

The USCGC Cuyahoga while on a training cruise in the Chesapeake Bay on October 20, 1978 collided with the Argentinean cargo vessel Santa Cruz II. The Cuyahoga sank within 2 minutes of the collision and resulted in the immediate deaths of 11 of the men embarked. (1) Seventeen of the survivors were returned to the

Reserve Training Center, Yorktown, Va. following treatment for minor injuries and exposure at the Patuxent River Naval Air Station. One was hospitalized two days for observation and then returned to duty.

A disaster is seen as an event that occurs suddenly, unexpectedly, uncontrollably, is catastrophic in nature, involves threatened or actual loss of life or property, disrupts the sense of community and often results in adverse psychological consequences for the survivors. A variety of studies of civilian disasters have documented the occurrence of psychological problems among the survivors. (2-7) Post-traumatic stress disorder is of major interest in these situations because of its prevalence and potential for prevention if there is early intervention. matter has also been of major concern to military mental health professionals. (8-10) It has been demonstrated that soldiers having psychological difficulties following combat situations will not have a long-term disability if intensive and rapid treatment is begun immediately near the site of the trauma $^{(11-12)}$ and is coupled with the expectation that the individual will quickly recover. Post-traumatic stress disorder also has occured following collisions involving military vessels. Immediately after the collision between the USS Kennedy and the USS Belknap on November 22, 1975 several of the Belknap crewmen were seen in Navy mental health clinics. (13) The diagnosis of post-traumatic stress disorder could have been established (14) in many cases. Pollowing this collision and another involving a Navy liberty launch in Barcelona Harbor in 1977 the psychiatric department at the Portsmouth Naval Hospital sought a means of providing mental health services immediately following a disaster. The result of this effort was the establishment of a group of mental health professionals capable of going to the scene of a disaster to provide support on very short notice. The name given to this group was the Special Psychiatric Rapid Intervention Team (SPRINT).

Within two days of the collision involving the USCGC Cuyahoga the assistance of the SPRINT was requested. It was deployed the same day it was requested and included a psychiatrist, chaplain, psychologist, psychiatric resident, psychiatric technician, social worker, and two nurses. An initial consultation with the Commanding Officer, Coast Guard Reserve Training Center was followed almost immediately by the commencement of individual interviews with the survivors. Intervention was also provided to family members, co-workers, classmates, medical personnel, instructors, and support personnel. Group and individual meetings were held, resulting in approximately 264 contacts with 91 individuals over a 12-day period.

DATA SOURCES AND PROCEDURES

Most of the data presented in this paper was taken from questionnaires that had been prepared by SPRINT. They covered demographic data, reactions to the accident, and life changes prior to the accident using the Social Readjustment Rating Questionnaire. (15) Survivors or others significantly affected by the collision filled them out within the first three days of the collision. Information from these questionnaires and anecdotal comments made by SPRINT members were reviewed and summarized.

SUBJECTS

The subjects in this study were the 18 survivors of the Cuyahoga crew: 7 were members of the ship's company and 11 were officer candidates. The demographic characteristics and service background of the two groups are as follows. Ship's company rate/rank - 1 officer, 3 petty officers, 3 non-rated; average age 25.3 years; average time in service 6.8 years; average time in grade .98 years; education level - 5 high school graduates, 1 GED, 1 10th grade; marital status - 2 married, 5 single; religion - 6 Protestant, 1 Catholic; average General Qualification Test 56.6; family background - 5 family intact, 2 missing data. The officer candidates had the following characteristics: average age 26.7 years; average time in service 5.16 years; length of time in Officer Candidate School 6 weeks; education level - 6 college graduate, 3 one year of college, 1 associate arts degree, 1 high school graduate; marital status - 8 married, 3 single; religion - 2 no preferance, 3 "Christian", 5 Protestant, 1 Catholic; family background - 8 intact, 1 broken, 2 no data.

RESULTS

The Social Readjustment Rating Questionnaire was given to the survivors, with instructions to include events that had taken place within the last six months. The average score for the ship's company was 174 life change units and for the officer candidates 333, with one member of each group not completing the questionnaire. The following emotional and physical symptoms were recorded on a questionnaire filled out by the survivors. The first number indicates the frequency of positive responses made by ship's company and the second made by the officer candidates: ctying spells 3,3; insomnia 1,1; fatigue 3,3; fear of boats 2,1; sadness 3,7; irritability 3,3; increased smoking 1,2; restlessness 2,2; nightmares 1,2; stuttering 1,2; fear of water 1,0; decreased concentration 1,5; feeling of vulnerability 0,3; social withdrawal 0,1; dissociation 0,2; lethargic 0,1; dizziness 0,1; poor appetite 0,1; headaches 1,1; diarrhea 0,1; hyperventilation 0,1; palpatations 0,2; muscle aches 0,1; nausea 0,1; weight gain 0,1; pain 0,1; numbness 1,0; shortness of breath 1,0; muscle weakness 1,0; total number of responses 26,49.

An initial reaction to the collision expressed by members of the ship's company was that they were having difficulty understanding why the accident took place because it occurred on a night when the visibility was excellent and the seas were calm. Feelings expressed by these men included states of anger alternating with sadness, fear of having to return to sea, and grief over the loss of friends. The reactions of the officer candidates were similar to those of the ship's company. They included anger, disappointment and sadness over the death of friends, and loss of

the sense of invulnerability. One officer candidate wanted changes made in shipboard procedures, hoping that this might prevent the occurrence of another accident, thus giving him a sense that the accident served some useful purpose. Common among the two groups were feelings that they were glad to be alive, mixed with guilt that they had survived. The comments they made concerning their understanding as to why they were able to survive included: "luck of the watch schedule", "luck", "lucky" (because he should have been asleep at the time), "help from another," "God", "determination", "God put me on the bridge", "God, and right place and right time", "luck and divine intervention", and "knew the ship better....". As a result of the accident one officer candidate stated that he discovered how easy it is to die. In several cases the collision brought up memories of past traumatic events. These included the deaths of family members, and personal experiences in combat and other accidents. During the first two weeks that the SPRINT was at the training center no diagnoses were established.

Anecdotal information from the SPRINT provided additional insight about their work and the people they saw. The team reported having no difficulty being accepted at the center and found that their clients were very willing to talk to them about their thoughts and feelings. It has been theorized that the reason for this acceptance was that the team was seen as a group of helping professionals who were knowledgeable about a sailor's existence and matters related to the sea. They were non-threatening from the standpoint of the investigation that was being conducted because assurances were given that confidentiality would be maintained. The fact that the SPRINT were members of a different service seemed to provide an additional sense of security. The training center command was equally accepting of their support. The team's meetings resulted in some of the following observations. When first seen, the reactions noted among the survivors were ones of shock, surprise, or in some cases joking or acting as though nothing had happened. Soon thereafter it was apparent that there were strong feelings of guilt and relief that they had survived. It was also noted they seemed to be loyal to and supportive of the commanding officer of the Cuyahoga. Anger was directed at nebulous "others" higher in the chain of command, feeling that "they" could have and should have done something to prevent the collision. Inanimate objects were seen as culpable, with adverse comments directed against the Santa Cruz and the Cuyahoga which they perceived as an inadequate and antiquated 51 year-old ship. At the same time there was an interest in wanting to return to it to reminisce about what had taken place during the collision. This they did after it was raised.

People stationed at the center, other than the survivors, also had difficulties. Almost everyone there was affected to some degree by this tragedy since the number of people stationed at the training center was relatively small. Multiple groups of various compositions met with the SPRINT to help deal with their feelings. Meetings were held with the classmates of the victims and on several occasions the idea was expressed that if one of them had been on the ship that maybe there would not have been a collision. They thought that had they been there, they would have been able to recognize the danger and taken the appropriate actions to avoid the collision. The wives of the deceased were seen individually by a chaplain and psychiatric resident. They were

dealing with bereavement and were helped in traditional ways. Wives of the survivors and other wives at the center were seen in group sessions. They were also dealing with bereavement, but they enountered additional problems. Many were puzzled by their husbands' reactions which for some was a change to isolation and silence and for others becoming much more talkative than they usually were. These wives felt threatened because they knew that their husbands' jobs would continue to expose them to dangerous situations in the future. They were distraught because the accident occurred during a training mission rather than a rescue, thus the accident seemed meaningless and without justification. They also had a sense of guilt over the joy of having their husbands return.

A memorial service was held on October 25, 1978 which was followed by a reception, both of which were attended by the team members. The SPRINT worked at the training center for about two weeks which was followed by approximately one year of periodic contact by telephone between the training command and the SPRINT leader. Some of the survivors had clinical follow-up during the one year following the collision.

DISCUSSION

The psychological reactions of the ship's company and the officer candidates were substantially the same. Both groups were dealing with grief over the loss of friends and survivor's guilt.

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The physical and psychological symptoms they cited in the questionnaires were quite similar. However, there were some differences. The higher number of responses for "decreased concentration" among the officer candidates is one exception and may represent an interference in their tasks as students, which would be expected to be more noticeable to them. A previous study has established a base line of 85 life change units for those reporting an excellent health status. (16) Both groups had averages that were significantly higher, but the officer candidates score was much higher than the average for the ship's company. This would be expected since the officer candidates had recently moved to the training center and in some cases just finished college and were recently married. They had also been experiencing the demands of an academic environment and a forced, intense, but brief (six weeks) closeness with other officer candidates. Additionally, some were quite new to and thus unfamiliar with military life. Pollowing the accident they still faced the task of completing their training on time, which they were expected to do. In contrast, the ship's company had lost their place of work, and for some, their place of abode. They were in a less strict and intense environment and had associated with others at their duty station over a longer period of time. The particular focus of the wives of the survivors and the deceased has been enumerated above. The survivors' comments such as why they thought they were able to survive and seeing how easy it was to die, along with the wives' concerns about the possibility of future work related risks, all suggest a realization at some level of their powerlessness and lack of control.

The SPRINT identified several variables that were important to the success of their work. Early intervention, good communication and support from the training center command, assurances to the survivors that confidentiality would be maintained, working within their natural groups and

having a team composed of enough personnel with a variety of expertise were seen as critical. Another helpful aspect of the intervention involved the memorial service. The team attended a memorial service which was followed by a reception. It was their opinion that both served a useful function, the memorial service giving sanction to the grieving process and the reception signifying the continuance of life.

RECOMMENDATION

It is recommended that follow-up research be conducted on the survivors of this accident. Another accident that involved a SPRINT activation was the USCGC Blackthorn disaster which similarly should be followed up to determine long-term consequences for survivors. Five years have passed since the collision involving the USCGC Cuyahoga and more than four since the one involving the USCGC Blackthorn. This amount of time should be sufficient to compare outcome variables for survivors of these disasters and a control group. The most appropriate method of study would be an epdemiologic approach involving the comparison of the survivors' health and service records with those of a control group. The importance of this proposed research cannot be underestimated. These disasters involved SPRINT activations and are the only ones where fewer members would be expected to have post-traumatic stress disorders. The outcome of this research should indicate the degree of effectiveness of SPRINT and, therefore, will make an important contribution to the development of systems designed to manage psychiatric casualties resulting from future maritime disasters.

REFERENCES

- 1. Marine Board Casualty Report: USCG Cuyahoga, M/V Santa Cruz II (Argentinean): Collision in Chesapeake Bay on 20 October 1978 with subsequent sinking of the USCG Cuyahoga and loss of life. U. S. Coast Guard. Washington, D.C. 20590, 31 July 1979.
- Boman, B. "Behavioral Observations on the Graville Train Disaster and the Significance of Stress for Psychiatry," <u>Social Science and Medicine</u>, Vol. 13A, 1979, pp. 463-471.
- Drabeck, T., Key, W., Erickson, P. and J. Crewe. <u>Longitudinal Impact of Disaster on Pamily</u>
 Functioning, University of Denver, Denver, 1973.
- Bennet, G. "Bristol Floods 1968. Controlled Survey of Effects on Health of Local Community Disaster," <u>British Medical Journal</u>, Vol. 3, 1954, p. 454-458.
- Leopold, R. and H. Dillon. "Psycho-anatomy of a Disaster: A Long Term Study of Post-Traumatic Neuroses in Survivors of a Marine Explosion," <u>American Journal of Psychiatry</u>, Vol. 119, 1963, pp. 913-921.
- 6. Friedman, P. and L. Linn. "Some Psychiatric Notes on the Andrea Doria Disaster," American

 Journal of Psychiatry, Vol. 114, 1957, pp 426-432.
- Rongell, L. "Discussion of the Buffalo Creek Disaster: The course of psychic trauma."
 American Journal of Psychiatry, Vol. 133, 1976, pp. 313-316.
- 8. Atkinson, R., Henderson, R., Sparr, L. and S. Deale. "Assessment of Viet Nam Veterans for Posttraumatic Stress Disorder in Veterans Administration Disability Claims," American Journal of Psychiatry, Vol. 139, 1982, pp. 1118-1121.
- Belenky, G., Tryner, C., and L. Sodetz. "Israeli Battle Shock Casualties: 1973 and 1982,"
 Walter Reed Army Institute of Research, Washington, D.C. 20307, 1983.
- Van Putten, J. and W. Emory. "Traumatic Neuroses in Vietnam Returnees," General Psychiatry, Vol. 29, 1979, pp. 695-698.
- 11. Kardiner, A. "Traumatic Neuroses of War," American Handbook of Psychiatry, Vol. One, Chapter 12, p. 251-253. Basic Books, Inc. New York, 1959.
- 12. Tifrany, W. and W. Allerton. "Army Psychiatry in the Mid-60s," American Journal of Psychiatry, Vol. 123, 1967, pp. 810-821.
- 13. Hoiberg, A. and B. McCaughey. "The Traumatic Aftereffects of Collision at Sea," American

 Journal of Psychiatry, Vol. 141, 1984, pp. 70-73.
- 14. American Psychiatric Association, <u>Diagnostic and Statistical Manual of Mental Disorders</u>
 (Third Edition), American Psychiatric Association, Washington, D.C. 1980.
- 15. Holmes, T. and R. Rahe. "The Social Readjustment Rating Scale," <u>Journal of Psychosomatic</u>

 Research, Vol. 11, 1967, pp. 213-218.
- 16. Rahe, R. and R. Arthur. "Life-Change Patterns Surrounding Illness Experience," <u>Journal of Psychosomatic Research</u>, Vol. 11, 1968, p. 341-345.

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